



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,723	03/19/2004	Ehud J. Schmidt	GEMS8081.204	2722
27061	7590	07/24/2009		
ZIOLKOWSKI PATENT SOLUTIONS GROUP, SC (GEMS) 136 S WISCONSIN ST PORT WASHINGTON, WI 53074			EXAMINER WEATHERBY, ELLSWORTH	
			ART UNIT	PAPER NUMBER
			3768	
			NOTIFICATION DATE	DELIVERY MODE
			07/24/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

info@zpspatents.com
rlt@zpspatents.com
klb@zpspatents.com

Office Action Summary	Application No. 10/708,723	Applicant(s) SCHMIDT, EHUD J.	
	Examiner ELLSWORTH WEATHERBY	Art Unit 3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of claims 1-16 in the reply filed on 04/04/2008 is acknowledged. The traversal is on the ground(s) that the inventions cannot be shown to be distinct. This is not found persuasive. Although applicant added claims 31 and 32, These are dependant on a non-elected invention and are, thus, withdrawn from consideration as being a non-elected claims. The Examiner stands that combination/subcombination restriction is proper. That is, the particulars of Invention II are not required for the operation Invention I. Here, the MRI system with a tracking probe does not require the auto-expanding RF-bars. Rather, Invention I is directed toward tracking the motion an RF coil to gate the image acquisition. Furthermore, the particulars of invention II has separate utility in providing a stationary or improved sensitivity profile. That is, Invention I calls for gating an imaging sequence in response to the movement of a probe. The motion-based gating of an imaging sequence is not required anywhere for the operation of Invention II. Applicant disputes that there would be a burden on the examiner if the restriction was not made. Here, the examiner stands that a search for an implantable RF-coil type catheter must include searches of surgical device classes (e.g catheters and endoscopes) and electronic circuit measurements. However, a MRI system with an insertable probe is uniquely classified under medical diagnostic testing class 600, subclass 424 and would require separate searches for

tracking pulse sequences. Furthermore, the Examiner notes that an updated search is performed with every office action.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 4-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Atalar et al. (U.S. Patent No. 6,628,980).

Atalar et al. '980 teaches a probe for acquiring data in magnetic resonance imaging, the probe comprising: a self-expanding housing insertable into a subject to be imaged and constructed to permit fluid flow there through, including blood (col. 3, lines 55-67; col. 4, lines 1-5; col. 19, lines 50-56); and a plurality RF coils attached to the housing (col. 6, lines 55-60). Atalar et al. '980 also teaches that the device is constructed to be insertable into a vascular system of the subject to be imaged (col. 19, lines 50-56). Atalar et al. '980 also teaches that the device further comprises at least one tuning capacitor connected to the plurality RF coils, the at least one tuning capacitor configured to tune the plurality RF coils (col. 17, lines 40-44). Atalar et al. '980 further teaches a shaft connected to the housing and constructed to position the housing within the subject to be imaged (col. 4, lines 40-43). Atalar et al. '980 also

Art Unit: 3768

teaches a retractable sheath constructed to enclose the housing during insertion into the subject and translation to a target tissue to be imaged and further constructed to be retracted by a user to allow the housing to expand when proximity to the target tissue is reached (col. 16, lines 29-31). Atalar et al. '980 also teaches that the sheath is constructed to enclose the housing during insertion into the subject and translation to a target tissue to be imaged and further constructed to be retracted by a user to allow the housing to expand when proximity to the target tissue is reached (col. 15, lines 66-67; col. 16, 1-11; col. 16, lines 29-31). Atalar et al. '980 also teaches that the sheath is formed of a material that applies a compression force upon the housing and the plurality RF coils during insertion into the subject and translation to the target tissue to be imaged, and wherein the housing is constructed of material to automatically expand the plurality RF coils when the compression force is removed, and further, that the sheath has a shaft that exceeds a distance from an insertion point to the target tissue to be imaged (col. 15, lines 66-67; col. 16, 1-37). Atalar et al. '980 also teaches utilizing nitinol bars for attaching the plurality RF coils thereto such that a first RF coil is connected to the first pair of bars and a second RF coil is connected to the second pair of bars (col. 14, lines 57-60). Atalar et al. '980 further teaches that the first pair of bars is located in a first plane and the second pair of bars is located in a second plane (fig. 6D). Atalar et al. '980 further teaches that the first and second planes are perpendicular to each other (fig. 4A). Atalar et al. '980 also teaches a gap formed between the plurality of RF coils and the housing is configured to increase RF sensitivity away from the probe, as well as, insulating the gap with a dielectric material (col. 13, lines 66-67; col. 14, lines 1-11).

Atalar et al. '980 also teaches that the catheter allows blood to pass across the expanded catheter (col. 3, lines 55-67; col. 4, lines 1-5).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Atalar et al. (U.S. Patent No. 6,628,980) in view of Nevo et al. (USPN 6,516,213).

Atalar et al. '980 teaches all the limitations of the claimed invention except for expressly teaching that the tracking coil is configured to transmit tracking signals for gating data acquisition.

In the same field of endeavor, Nevo et al. '025 teaches using tracking coils configured to transmit tracking signals for gating data acquisition (col. 14, ll. 21-40).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Atalar et al. '980 in view of Nevo et al. '213. The motivation to modify Atalar et al. '980 in view of Nevo et al. '213 would have been to provide the method with accurate readings of position or orientation of the probe throughout the procedure where the position data is acquired using commercially available tracking coils.

Response to Arguments

8. Applicant's arguments filed 05/14/2007 have been fully considered but they are not persuasive.

9. Regarding claim 1, Applicant alleges that Atalar does not teach or suggest "a gap formed between the plurality of RF coils and the housing configured to increase RF sensitivity away from the probe". Applicant further alleges that Atalar fails to teach a plurality of RF coils separated from an expandable housing by a gap therebetween. Here, Applicant alleges that the expandable housing in Atalar is the imaging coil. The Examiner disagrees. The Examiner had applied Atalar for Atalar's express teachings of an expandable probe 870 (i.e. a self expanding housing...) a plurality of RF coils 804 attached to probe 870 (see Fig. 8A) wherein a gap formed between the plurality of RF coils and the housing is configured to increase RF sensitivity away from the probe 802 (see col. 16, l. 64- col. 17, l. 24).

10. Applicant has not presented any further arguments with respect to the prior art rejections of claims 1-16. Accordingly, claims 1-16 stand rejected on the grounds set forth above.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELLSWORTH WEATHERBY whose telephone number is (571) 272-2248. The examiner can normally be reached on M-F 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on (571) 272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3768

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/EW/

/Long V Le/
Supervisory Patent Examiner, Art Unit 3768